REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks.

Support for the claim amendments and additions can be found in the original disclosure. No new matter has been added.

§ 112 FIRST PARAGRAPH REJECTIONS

Claims 1, 2, 18, 19 and 32 stand rejected under 35 U.S.C. § 112, ¶ 1, as allegedly being indefinite. Applicant respectfully traverses the rejections. However, solely in the interest of moving prosecution forward and without giving propriety to the rejections applicant has amended claims 1, 2, 18, 19 and 32 to include "physically or temporally near." Applicant therefore respectfully requests that the Office withdraw the rejection.

The Office states that "near" is also indefinite because it is not clearly understood "how far or close of a distance the applicant considers as near." (Office Action) Applicant submits that "near" would be a relative term that would vary on a case by case basis. For instance, Applicant directs the Office's attention to the specification, which states that: "For example, peer groups 704, 706 and 708 are **relatively nearby** peer group 702 in the transport network and peer group 702." (Specification [0029], emphasis added) (See also, Figure 7). As seen in Figure 7, this is in contrast to other groups that are father away such as group 718 and 720. Applicant, therefore, respectfully requests that the § 112 rejections be withdrawn.

§ 101 REJECTIONS

Independent claims 1, 10, 25 and dependent claims 2-9, 11-16 and 19-24 stand rejected under 35 U.S.C. § 101. Applicant respectfully transverses the rejections. However, solely in the interest of moving prosecution forward and without giving propriety to the rejections Applicant has amended claims 1-17 and 25 to recite "computer-readable storage medium." Applicant has also amended claim 18 to recite: "a processor; and a memory coupled to the processor..." Applicant understood the Examiner to agree that this overcomes the rejections. Applicant therefore respectfully requests that the rejections be withdrawn.

§ 102 REJECTIONS

Claims 25-30, 38 and 39 are rejected under 35 U.S.C. § 102(a) as being

anticipated by Banerjee et al. (Scalable Peer Finding on the Internet), hereinafter

Banerjee.   Applicant respectfully traverses the rejections.

Independent claim 25, as presently presented, recites (emphasis added):

25.   (Currently Amended)   A computer-readable storage medium having thereon computer-executable instructions for performing a method comprising:
from a first overlay network peer group, querying a second overlay network peer group for at least one overlay network peer group neighbor of the second overlay network peer group;
measuring a transport network distance between the first overlay network peer group and each of said at least one overlay network peer group neighbor of the second overlay network peer group; and
establishing at least one overlay network connection between the first overlay network peer group and one of said at least one overlay network peer group neighbor of the second overlay network peer group at a minimum measured transport network distance from the first overlay network peer group,
wherein the computer-readable storage medium further stores computer-executable instructions for:
(i)   maintaining an intra-group cache comprising information
regarding a first overlay network peer group in which a peer participates; and
(ii) maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate;
wherein each peer in each overlay network peer group is configured to detect transport network localities and self-organize into interconnected groups by communicating with a locality-aware peer in another overlay network peer group.

Claim 25 stands rejected under 35 U.S.C. § 102(a) as being anticipated by Banerjee . Applicant respectfully traverses the rejection. Nevertheless, without conceding the propriety of the rejection and in the interest of expediting allowance of the application, independent claim 25 is amended.

Applicant asserts that the evidence in the Banerjee reference does not disclose, either expressly or inherently the subject matter of amended claim 25, namely:

> wherein the computer-readable storage medium further stores computer-executable instructions for:
> (i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which a peer participates; and
> (ii) maintaining **an inter-group cache** comprising **information regarding at least one overlay network peer group in which the peer does not participate**;
> wherein each peer in each overlay network peer group is configured to detect transport network localities and self-organize into interconnected groups by communicating with a locality-aware peer in another overlay network peer group. (emphasis added).

In contrast, Banerjee discloses "defin[ing] a new peer finding scheme (called Tiers) that scales to large application peer groups." (Abstract). As illustrated in Fig. 2, a new host A1 must communicate with hosts in multiple tiers of the hierarchy (see Fig. 1) in order to find out proximity information about peers in other groups. Because this information is maintained at the host (rather than the peer) level, Banerjee does not disclose "maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate; wherein each peer in each overlay network peer group is configured to detect transport network localities and self-organize into interconnected groups by communicating with a locality-aware peer in another overlay network peer group", as in amended claim 25.

Thus, Applicant respectfully submits that Banerjee fails to disclose the features of claim 25. During the interview, Applicant understood the Examiner to tentatively agree. Applicant thanks the Examiner for this indication. For at least these reasons, Applicant respectfully submits that claim 25 stands allowable.

Dependent claims 26-30 depend from independent claim 25 and are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests that the § 102 rejection of these claims be withdrawn.

Independent claim 38, as presently presented, recites (emphasis added):

38.   (Currently Amended) A computer-implemented method, comprising:

    querying a first overlay network peer group for one or more overlay network peer group neighbors of the first overlay network peer group;

    measuring a transport network distance between a second overlay network peer group and each of the one or more overlay network peer group neighbors of the first overlay network peer group; and

    establishing at least one overlay network connection between the second overlay network peer group and one of the one or more overlay network peer group neighbors of the first overlay network peer group that is at a minimum transport network distance from the second overlay network peer group, **wherein each of the peers is configured with:**

    (i)   an intra-group cache which includes information regarding an overlay network peer group in which a peer participates, and

    (ii) an inter-group cache which includes information regarding overlay network peer group neighbors other than the overlay network in which the peer participates.

Applicant herein submits amended independent claim 38, which now recites subject matter similar to that previously presented claim 25. In making out a rejection of claim 38, the Office argues that Banerjee anticipates. Applicant respectfully disagrees. Nevertheless, Applicant herein amends the claim as shown above. Applicant respectfully asserts that the cited reference do not disclose the features of claim 38 for at least reasons similar to those discussed above in regards to claim 25. Therefore, this claim is allowable for at least this reason.

Dependent claim 39 depends from independent claim 38 and is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests that the § 102 rejection of this claim be withdrawn.

§ 103 REJECTIONS

Claims 1-2, 18, 19 and 32, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy et al. (Topologically-Aware Overlay Construction and Server Selection), hereinafter Ratnasamy, in view of Zhang et al (Pub. No US 2004/0047350 Al), hereinafter Zhang.

Claims 3-5, 34, 37 and 41, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy et al. (Topologically-Aware Overlay Construction and Server Selection), hereinafter Ratnasamy, in view of Pabla et al. (Pub. No US 2004/0162871 Al), hereinafter Pabla.

Claims 6-7, 20 and 33, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy and Pabla as applied to claim 1 above, in view of Banerjee.

Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy and Pabla as applied to claim 1 above, in view of Traversat et al. (Pub. No US 20020184310 Al), hereinafter Traversat.

Claims 10, 35 and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Banerjee in view of Traversat.

Claims 11-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Traversat, and Banerjee in view of Ratnasamy.

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Banerjee.

Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Xu et al. (Pub. No US 2004/0085329), hereinafter Xu.

Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy, in view of Traversat.

Claims 31 and 40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Banerjee in view of Ratnasamy.

Applicant respectfully traverses the rejections. Nevertheless, without conceding the propriety of the rejection and in the interest of expediting allowance of the application, the independent claims are amended to expedite allowance of the subject application.

Claims 1-2, 18, 19 and 32, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Zhang.

Independent claim 1 presently recites (emphasis added):

> 1. (Currently Amended) A computer-readable storage medium having thereon computer-executable instructions for performing a method comprising determining, at a peer, to join an overlay network peer group if a first set of transport network distances is physically or temporally near to a second set of transport network distances, the first set of transport network distances comprising at least one transport network distance between the overlay network peer group and at least one overlay network peer group neighbor of the overlay network peer group, and the second set of transport network distances comprising at least one transport network distance between the peer and said at least one overlay network peer group neighbor of the overlay network peer group, **wherein the computer-readable storage medium further stores computer-executable instructions for:**
> **(i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and**
> **(ii) maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate.**

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being obvious over Ratnasamy in view of Zhang. Applicant respectfully traverses the rejections. Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, independent claim 1 is amended to more distinctly recite features of Applicant's claimed subject matter.

Ratnasamy is directed to "present[ing] a *binning* scheme whereby nodes partition themselves into bins such that nodes that fall within a given bin are

relatively close to one another in terms of network latency." (Abstract). However,

Ratnasamy fails to teach or suggest:

> determining, at a peer, to join an overlay network peer group if a first set of transport network distances is physically or temporally near to a second set of transport network distances, the first set of transport network distances comprising at least one transport network distance **between** the overlay network peer group and at least one overlay network peer group **neighbor** of the overlay network peer group, and the second set of transport network distances comprising at least one transport network distance **between** the peer and said at least one overlay network peer group **neighbor** of the overlay network peer group

> and

> wherein the computer-readable storage medium further stores computer-executable instructions for:
> (i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and
> (ii) **maintaining an inter-group cache** comprising information regarding at least one overlay network peer group in which the peer does not participate. (emphasis added).

In contrast, Ratnasamy discloses "[a] scheme [that] requires a set of well known **landmark machines** spread across the internet. An application node measures its distance, i.e. round-trip time, to this set of well known landmarks and independently selects a particular bin based on these measurements." (page 1191, left column, second full paragraph, emphasis added). "Application nodes might discover the IP address of these machines using the DNS (for example, landmark machines could be named lm1.bin.net, lm2.bin.net,...rather than hard-coding

landmark IP addresses into the application." (page 1191, right column, second full paragraph).

Thus Ratnasamy fails to teach or suggest: "determining, at a peer, to join an overlay network peer group if a first set of transport network distances is physically or temporally near to a second set of transport network distances, the first set of transport network distances comprising at least one transport network distance **between** the overlay network peer group and at least one overlay network peer group **neighbor** of the overlay network peer group, and the second set of transport network distances comprising at least one transport network distance **between** the peer and said at least one overlay network peer group **neighbor** of the overlay network peer group," as Ratnasamy merely focuses on using **individual** "**landmark machines**" for measurements.

Additionally, this use of "landmarks" also infers that Ratnasamy fails to teach or suggest that "wherein the computer-readable storage medium further stores computer-executable instructions for: (i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and (ii) **maintaining an inter-group cache** comprising information regarding at least one overlay network peer group in which the peer does not participate." (emphasis added)

In other words, Ratnasamy fails to disclose the use of an inter-group cache as Ratnasamy uses "landmark" machines "whereby nodes partition themselves into bins such that nodes that fall within a given bin are relatively close to one

another in terns of network latency." (page 1191, left column second full paragraph). Therefore, Applicant respectfully asserts that the evidence in the Ratnasamy reference does not teach or suggest amended claim 1.

Applicant also respectfully submits that the Zhang reference does not teach or suggest the features of amended claim 1. Zhang describes: "a method for creating expressway for overlay routing, an existing peer-to-peer network is organized into a plurality of zones. The plurality of zones is organized into a plurality of levels." (Abstract). However, Zhang fails to remedy the deficiencies of Ratnasamy noted above.

Thus, Ratnasamy and Zhang, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of this claim. Accordingly, as discussed during the interview, this claim is allowable. During the interview, the Applicant understood the Examiners to agree.

Dependent claim 2 depends from independent claim 1 and is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the §103 rejection of this claim be withdrawn.

Independent claim 18, presently recites (emphasis added):

18.   (Currently Amended) A computerized system, comprising:
a processor;
a memory coupled to the processor; and
a join locality-aware overlay module configured to, at least, determine that an overlay network peer should join an overlay network peer group if a first set of transport network distances is physically or temporally near to a second set of transport network distances, the first set of transport network distances comprising at least one transport network distance between the overlay network peer group and at least one overlay network peer group neighbor of the overlay network peer group, and the second set of transport network distances comprising at least one transport network distance between the overlay network peer and the at least one overlay network peer group neighbor of the overlay network peer group, **wherein the computerized system is further configured to:**
(i) maintain an intra-group cache comprising information regarding a first overlay network peer group in which the overlay network peer participates; and
(ii) maintain an inter-group cache comprising information regarding at least one overlay network peer group in which the overlay network peer does not participate.

In a similar manner to independent claim 1, applicant asserts that Ratnasamy and Zhang do not teach or disclose at least the added features of this amended claim. Therefore, this claim is allowable for at least this reason. Thus, Ratnasamy and Zhang whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of this claim. Accordingly, as discussed during the interview, this claim is allowable.

Dependent claim 19 depends from independent claim 18 and is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the §103 rejection of this claim be withdrawn.

Independent claim 32 presently recites (emphasis added):

> 32.   (Currently Amended)   A computer-implemented method, comprising determining to join an overlay network peer group if a first set of transport network distances is physically or temporally near to a second set of transport network distances, the first set of transport network distances comprising at least one transport network distance between the overlay network peer group and at least one overlay network peer group neighbor of the overlay network peer group, and the second set of transport network distances comprising at least one transport network distance between a peer and said at least one overlay network peer group neighbor of the overlay network peer group,
>
> **wherein the computer-implemented method further comprises:**
>
> > **(i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and**
> >
> > **(ii) maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate.**

In a similar manner to independent claim 1, applicant asserts that Ratnasamy and Zhang do not teach or disclose at least the added features of this amended claim. Therefore, this claim is allowable for at least this reason. Thus, Ratnasamy and Zhang whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of this claim. Accordingly, as discussed during the interview, this claim is allowable.

RATNASAMY IN VIEW OF PABLA

Claims 3-5, 34, 37 and 41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Pabla. Applicant respectfully traverses the rejections.

As discussed above, Ratnasamy fails to teach or suggest the features of independent claim 1. Pabla discloses "A mechanism is described that allows devices (typically small footprint, or simply "small", devices, with limited resources) to participate as peer nodes in peer-to-peer network environments, typically through wireless connections, although the mechanism may also be used across wired connections..." ([0020]).

However, Pabla still fails to remedy the deficiencies in Ratnasamy as noted above. Thus, Ratnasamy in view of Pabla, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of the independent claims reproduced above.

Therefore, **dependent claims 3-5, 34, 37 and 41** which depend from independent claims 1, 32 and 38 and are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

RATNASAMY IN VIEW OF PABLA IN FURTHER VIEW OF BANERJEE

Claims 6-7, 20 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Pabla in further view of Banerjee. Applicant respectfully traverses the rejections.

As discussed above, both Ratnasamy and Pabla fail to teach or suggest the features of independent claim 1. Banerjee discloses "defin[ing] a new peer finding scheme (called Tiers) that scales to large application peer groups." (Abstract).

However, Banerjee still fails to remedy the deficiencies in Ratnasamy and Pabla as noted above. Thus, Ratnasamy in view of Pabla in further view of Banerjee, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of the independent claims reproduced above.

Therefore, **dependent claims 6-7, 20 and 33** depend from independent claims 1, 18 and 32 and are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

RATNASAMY IN VIEW OF PABLA IN FURTHER VIEW OF TRAVERSAT

Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Pabla in further view of Traversat. Applicant respectfully traverses the rejections.

As discussed above, both Ratnasamy and Pabla fail to teach or suggest the features of independent claim 1. Traversat discloses a system where "[e]ach peer group may define a common set of services available to members of that peer group. Members of a peer group may be configured to share a network service or

content with other members of that peer group only, so that a peer group may define a limited domain of availability for network services or content." ([0027]).

However, Traversat still fails to remedy the deficiencies in Ratnasamy and Pabla as noted above. Thus, Ratnasamy in view of Pabla in further view of Traversat, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of the independent claims reproduced above.

Therefore, **dependent claims 8 and 9** which depend from independent claim 1 and are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

BANERJEE IN VIEW OF TRAVERSAT

Claims 10, 35 and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Banerjee in view of Traversat. Applicant respectfully traverses the rejections.

Independent claim 10, presently recites (emphasis added):

10. (Currently Amended) A computer-readable storage medium having thereon computer-executable instructions for performing a method comprising grouping overlay network peers such that each peer in a peer group has a similar transport network proximity measure with respect to peers in other peer groups, **wherein the computer-readable storage medium further stores computer-executable instructions for:**

   (i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and

   (ii) maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate.

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being obvious over Banerjee in view of Traversat. Applicant respectfully traverses the rejection. Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, independent claim 10 is amended to more distinctly recite features of Applicant's claimed subject matter.

As discussed above, Banerjee discloses "defin[ing] a new peer finding scheme (called Tiers) that scales to large application peer groups." (Abstract). As illustrated in Fig. 2, a new host A1 must communicate with hosts in multiple tiers of the hierarchy (see Fig. 1) in order to find out proximity information about peers in other groups. This is because not all peers "in each overlay network peer group [are] configured with:...an inter-group cache which includes information regarding overlay network peer groups other than the overlay network peer group in which the peer participates," as in amended claim 1. (Abstract). However, Banerjee fails to teach or suggest:

wherein the computer-readable storage medium further stores computer-executable instructions for:

(i) maintaining an intra-group cache comprising information regarding a first overlay network peer group in which the peer participates; and

(ii) maintaining an inter-group cache comprising information regarding at least one overlay network peer group in which the peer does not participate.

Thus, Applicant respectfully submits that Banerjee fails to teach or suggest the features of claim 10. During the interview, Applicant understood the Examiner to tentatively agree. Applicant thanks the Examiner for this indication. For at least these reasons, Applicant respectfully submits that claim 10 stands allowable.

Applicant also respectfully submits that the Traversat reference does not teach or suggest the features of amended claim 10. Traversat describes: "Each peer group may define a common set of services available to members of that peer group. Members of a peer group may be configured to share a network service or content with other members of that peer group only, so that a peer group may define a limited domain of availability for network services or content." ([0027]). However, Traversat fails to remedy the deficiencies of Banerjee noted above.

Thus, Banerjee and Traversat, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of this claim. Accordingly, as discussed during the interview,

this claim is allowable. During the interview, the Applicant understood the Examiners to agree.

Independent claim 35, presently recites (emphasis added):

35. (Currently Amended) A computer-implemented method, comprising grouping overlay network peers such that each peer in a peer group has a similar transport network proximity measure with respect to peers in other peer groups, **wherein at least one of the peers is configured with:**
(i) an intra-group cache which includes information regarding an overlay network peer group in which the peer participates; and
(ii) an inter-group cache which includes information regarding overlay network peer group neighbors other than the overlay network in which the peer participates.

In a similar manner to independent claim 10, applicant asserts that Banerjee and Traversat do not teach or disclose at least the added features of this amended claim. Therefore, this claim is allowable for at least this reason. Thus, Banerjee and Traversat whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of this claim. Accordingly, as discussed during the interview, this claim is allowable.

Dependent claim 36 depends from independent claim 35 and is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the § 103 rejection of this claim be withdrawn.

TRAVERSAT IN VIEW OF BANERJEE AND RATNASAMY

Claims 11-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of Banerjee in further view of Ratnasamy. Applicant respectfully traverses the rejections.

As discussed above, both Banerjee and Traversat fail to teach or suggest the features of independent claim 10. Ratnasamy is directed to "present[ing] a *binning* scheme whereby nodes partition themselves into bins such that nodes that fall within a given bin are relatively close to one another in terms of network latency." (Abstract).

However, Ratnasamy still fails to remedy the deficiencies in Traversat and Banerjee as noted above. Thus, Ratnasamy in view of Traversat in further view of Banerjee, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of the independent claims reproduced above.

Therefore, **dependent claims 11-17** which depend from independent claim 1 and are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

RATNASAMY IN VIEW OF BANERJEE

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Banerjee. Applicant respectfully traverses the rejections. As discussed above, Ratnasamy fails to teach or suggest the features of independent claim 18. Also discussed above is that Banerjee still fails to remedy

the deficiencies in Ratnasamy as noted above. Thus, Ratnasamy in view of Banerjee, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fails to teach or suggest:

> wherein the computerized system is further configured to:
>   (i) maintain an intra-group cache comprising information regarding a first overlay network peer group in which the overlay network peer participates; and
>   (ii) maintain an inter-group cache comprising information regarding at least one overlay network peer group in which the overlay network peer does not participate

Thus, **dependent claim 21**, which depends from independent claim 18, is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

RATNASAMY IN VIEW OF XU

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Pabla in further view of Traversat. Applicant respectfully traverses the rejection.

As discussed above, Ratnasamy fails to teach or suggest the features of independent claim 1. Xu discloses "In an embodiment of the present invention, an existing overlay network, such as CAN, eCAN, Tapestry, Chord, Pastry, and the like, may be augmented with an auxiliary network to improve performance (for example, routing performance). The auxiliary network, also termed "expressway network", allows the heterogenic conditions, i.e. characteristics of the underlying physical networks, to be exploited." ([0021])

However, Xu still fails to remedy the deficiencies in Ratnasamy as noted above. Thus, Ratnasamy in view of Xu in, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest the features of the independent claim.

Therefore, **dependent claim 2** which depends from independent claim 1 is allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the § 103 rejection of this claim be withdrawn.

RATNASAMY IN VIEW OF TRAVERSAT

Dependent Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratnasamy in view of Traversat. Applicant respectfully traverses the rejections. As discussed above, Ratnasamy fails to teach or suggest the features of independent claim 18. Also discussed above is that Traversat still fails to remedy the deficiencies in Ratnasamy as noted above. Thus, Ratnasamy in view of Traversat, whether taken alone or in combination (assuming for the sake of argument that they can be combined), fail to teach or suggest

> wherein the computerized system is further configured to:
> (i) maintain an intra-group cache comprising information regarding a first overlay network peer group in which the overlay network peer participates; and
> (ii) maintain an inter-group cache comprising information regarding at least one overlay network peer group in which the overlay network peer does not participate.

Therefore, **dependent claim 23 and 24**, which depend from independent claim 18, are allowable by virtue of this dependency, as well as for additional features that it recites. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

RATNASAMY IN VIEW OF BANERJEE

Claims 31 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ratnasamy in view of Banerjee. Applicant respectfully traverses the rejections. For instance, Applicant respectfully submits that Banerjee fails to support the § 102 rejections of base claims 25 and 38. Furthermore, Applicant respectfully submits that Banjeree fails to teach or suggest base claims 25 and 38.

Therefore, **dependent claims 31 and 40** which depend from independent claims 25 and 38 are allowable by virtue of this dependency, as well as for additional features that they recite. Applicant respectfully requests the § 103 rejection of these claims be withdrawn.

CONCLUSION

For at least the foregoing reasons, the pending claims are in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections and an early notice of allowance.

If any issue remains unresolved that would prevent allowance of this case, **Applicant requests that the Examiner contact the undersigned attorney to resolve the issue**.

Respectfully Submitted,

Lee & Hayes, PLLC
Representatives for Applicant

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